ADDENDUM

On May 4, 2012, Alison McCartney, Natural Resource Specialist, revisited the 79.48 acre parcel contained in EOI #817. The legal description for EOI #817 is: LA, Bossier Parish, T15N, R11W, Sec. 2, NWNE, Lots 6 and 8. It was verified that no additional surface disturbance has occurred on these parcels since the Environmental Assessment was originally written and approved on August 4, 2012. A public notice regarding this action will be published on 5/10/12 in the Shreveport Times.

BUREAU OF LAND MANAGEMENT Jackson FIELD OFFICE 411 Briarwood Drive, Sulte 404 Jackson, Mississippi 39206

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2009-71 ES-020-2010-14 ES-020-2010-18

PROJECT NAME: EOI #817, Bossier Parish, Louisiana Lease EA

EOI #841, Bossier Parish, Louisiana Lease EA EOI #856, Bossier Parish, Louisiana Lease EA

TECHNICAL REVIEW:

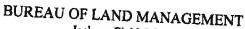
-	X Program			
	X Air Quality	Reviewer	Signature	
L	72-2-11	Alison McCartney Natural Resource		Da
	X ACEC	Alison McCartney	ASM	8/3/1
-	X Botanical including T&E Spp.	Natural Resource Specialist	ASM	8 3
L	mending 1&E Spp.	Alison McCartney Natural Resource	ASM	
	Communications (Dispatch)	Specialist	HOM	8/3/1
2	Cultural/Paleontology			
_	_==	John Sullivan	<u> </u>	
λ	Energy Policy	Archeologist		3 1/1
	as I sucy	Alison McCartney		8/3/10
		Natural Resource	ASM	/
X	Environmental Justice	Specialist	11311	8/3/1
	Justice	Alison McCartney		
	1	Natural Resource	10cm	
	Farmlands (Prime & Unique)	Specialist	ASM	8/3/10
-	Fire Management			1010110
X	Floodplain			(C
23174	- toouplain	Alison McCartney		
	1	Natural Resource	ASM	
X	Hazardous Material	Specialist	11.5.	8/3/10
	riazardous Material	Brian Kennedy		90110
X	Invesion 0 N	Physical Scientist	Ben Kennes	-//
	Invasive & Non-Native Spp.	Alison McCartney	10 - June	8/3/10
	1	Natural Resource	Acad	
	I ando/Pa-te	Specialist	ASM	8/3/10
_	Lands/Realty			4/3/10
_	Land Law Examiner			
X	Law Enforcement			
^	Minerals	Alison McCartney		
	M O	Natural Resource	A	
-		Specialist	ASM	8/3/10
x	Native American Religious Concerns	John Sullivan		Oller
_		Archeologist		-5.
_	Operations			8/3/10
	Range Management			77.0

X	Recreation	Alison McCartney Natural Resource Specialist	Asm	2/01
_	Soils	Alison McCartney Natural Resource	Asm	8/3/10
	Surface Protection	Specialist	11314	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	Visual Resources			-10/10
	Water Rights			
X	Water Quality (Surface & Ground)			
x	Wetlands/Riparian Zones	Alison McCartney Natural Resource Specialist	ASM	8/3/10
K		Alison McCartney Natural Resource Specialist	ASM	8/3/1
	Wild & Scenic Rivers	Alison McCartney Natural Resource Specialist	ASM	8/3/1
- 1	Wilderness	Alican M. C	1.3.6	10 Pol 10
\perp	Wild Horse & Burro	Alison McCartney Natural Resource Specialist	ASM	43/10
T	Wildlife including T&E Spp.			
	Actually rate Spp.	Alison McCartney Natural Resource Specialist	ASM	8/3/10

-

Prepared by:	
Alison McCartney Natural Resource Specialist	Date: 8/3/10
Reviewed by: Gary Taylor NEPA Coordinator	Date: 8 3 10
Reviewed by: Duane Winters Resource Supervisor	Date: 8-4-20/0
Reviewed by: John Dikes Minerals Supervisor	Date: O Y 10





Jackson Field Office 411 Briarwood Drive, Suite 404 Jackson, Mississippi 39206



Environmental Assessment ES-020-2009-71 ES-020-2010-14 ES-020-2010-18

EOI #817, Bossier Parish, Louisiana Lease EA EOI #841, Bossier Parish, Louisiana Lease EA EOI #856, Bossier Parish, Louisiana Lease EA

> Prepared by: Alison McCartney Date: May 25, 2010

CH 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This environmental assessment (EA) is prepared to address three proposed federal oil and gas lease nominations in Bossier Parish, Louisiana pursuant to the Minerals Leasing Act of 1920, as amended. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop oil and gas resources on federally owned property.

Need for the Proposed Action

The development of oil and natural gas is essential to meeting the nation's future needs for energy. Private exploration and development of federal oil and gas reserves are integral to the Bureau of Land Management's (BLM) oil and gas leasing programs under the authority of the Mineral Leasing Act 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, as amended, the Federal Land Policy and Management Act of 1976 and the Energy Policy Act of 2005. The oil and gas leasing program managed by BLM encourages the development of domestic oil and gas reserves and reduction of U.S. dependence on foreign sources of energy. The tracts considered for lease in this analysis was nominated by Expressions of Interest (EOIs) from private industry.

On September 9, 2009 (EOI #817), October 28, 2009 (EOI #841), and October 22, 2009 (EOI #856), the BLM, Jackson Field Office received requests from the BLM Eastern States Office for a National Environmental Policy Act (NEPA) Analysis report on 171.08 acres of land with the following legal descriptions: T15N, R11W, Sec. 2, NWNE, Lots 6 and 8 (79.48 acres) (EOI #817), T16N, R10W, Sec. 18, S2SW (80 acres) (EOI #841), and T17N, R12W, Sec. 29, Part of NE (11.59 acres) (EOI #856), Louisiana Meridian, Bossier Parish, Louisiana. These

Management Objectives of the Action

The objective of the proposed action is to make available for lease 171.08 acres in Bossier Parish, Louisiana to provide exclusive rights to the lessee to develop federally owned oil and gas resources.

Land Use Plan Conformance

The proposed action does not conflict with any known State or local planning, ordinance or zoning. This area is not covered by a BLM Resource Management Plan. According to the regulations at 43 CFR 1610.8 (b) (1), however, this environmental assessment can be used as a basis for making a decision on the proposal.

Applicable Regulatory Requirements and Required Coordination

Applicable regulatory requirements and required coordination for lease development of federal oil and gas minerals is authorized by several statutes including: The Mineral leasing Act, as

amended and supplemented (30 U.S.C. 181), The Mineral Leasing Act of 1947, as amended (30 U.S.C. 351-359), The National Historic Preservation Act, The American Indian Religious Freedom Act, The Native American Graves Protection and Repatriation Act, E.O. 13007, and/or other statutes and executive orders.

The following agencies/tribes were contacted (Appendix C):
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe of Louisiana
Caddo Nation of Oklahoma
Chickasaw Nation
Alabama Coushatta Tribe of Texas
Coushatta Indian Tribe
Alabama-Quassarte Tribal Town
Chitimacha Tribe of Louisiana
Thlopthlocco Tribal Town
Muscogee (Creek) Nation of Oklahoma
Choctaw Nation of Oklahoma
Mississippi Band of Choctaw Indians
Quapaw Tribe of Oklahoma

The proposed lease was subject to public review for a 30-day period per publication of a newspaper of local distribution (Appendix E).

Decision(s) That Must Be Made

There are two decisions under consideration from the BLM for the proposed action. The first is to offer the federal oil and gas mineral estate for competitive leasing. The other decision would be to deny the action so that no development and surface disturbance would take place. BLM's policy is to promote oil and gas development as long as it meets the guidelines and regulations set forth by the National Environmental Policy Act of 1969 and other subsequent laws and policies passed by the U.S. Congress.

CH 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

Tracts of land have been nominated for a federal oil and gas lease in Bossier Parish, Louisiana. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop oil and gas resources that may exist on split estate property.

Location

Legal descriptions for the nominated parcels are:

T15N, R11W, Sec. 2, NWNE, Lots 6 and 8, Louisiana Meridian, Bossier Parish, Louisiana (79.48 acres) (EOI #817)

T16N, R10W, Sec. 18, S2SW Louisiana Meridian, Bossier Parish, Louisiana (80 acres) (EOI #841)

T17N, R12W, Sec. 29, Part of NE, Louisiana Meridian, Bossier Parish, Louisiana (11.59 acres) (EOI #856)

Proposed Action

The BLM, Jackson Field Office has received three nominations or EOIs, to lease 171.08 acres of federal mineral estate for oil and gas development in Bossier Parish, Louisiana. This lease would give the lessee exclusive rights to explore and develop oil and gas reserves on the lease, but does not in itself authorize surface disturbing activities. This competitive lease provides exclusive rights to develop the federal oil and gas resources, but does not obligate the company to drill a well on the federal mineral estate. The lease can be used to consolidate acreage to meet well spacing requirements, and/or the mineral estate may be acquired for speculative value. The BLM will require applicants to adhere to Stipulations and Lease Notices/Best Management Practices for gas wells (Appendix B). The attached Stipulations and Lease Notices/Best Management Practices have been formulated while conducting our impact analysis and are made part of the proposed action.

The proposed nomination, if approved, would be offered for competitive sale with stipulations and notices generated through this and other consultations, as well as the (NEPA) process. Once awarded, the successful bidder is required to submit an Application for Permit to Drill (APD) to the BLM before any ground disturbance is authorized. In the APD, the company identifies a proposed drill site and provides the BLM with specific details on how and when they propose to drill the well within the constraints of the lease document. Upon receipt of an APD, BLM conducts an onsite inspection with the company, and when possible the private land owner or surface managing agency. NEPA and the Endangered Species Act (ESA) requirements must also be met at the APD stage and in those cases where there is the potential to affect federally or state-listed species, a site specific biological assessment is written, including the results of any biological surveys that may be indicated. This is submitted to U.S. Fish and Wildlife Service and/or the state wildlife agency for consultation, as appropriate. The lessee is required, as per lease stipulation, to comply with the recommendations of these consultations.

Typically, after approval of an APD, the petroleum industry follows a general plan and process for all proposed drill sites, as follows:

Spacing for the tracts will be 40 acres per well. Preparation for the drilling process includes construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 30 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction will be about 1/2 of a mile. Therefore, about 2 acres would be affected by road construction. Typically 2.5 acres are cleared and graded level for the construction of the drilling pad for a well. If the well is gas and productive, and the flowline is in the road, we can estimate that another 0.5 acres may be affected by flowline construction. The total disturbed area for drilling a productive

well will be approximately 5 acres. These disturbances are typical for private or Federal Ownership well locations. The excavation reserve pit is usually about five feet deep and is lined with bentonite clay to retain drilling fluids, circulated mud, and cuttings. Plastic or butyl liners (or its equivalent), that meet state standards for thickness and quality, are used on occasions when soils are determined incapable of holding pit fluids.

Because of the cost of the drilling rig, drilling usually continues around the clock. Wells in this area are usually drilled in 30 days. Once drilling is completed, excess fluids are pumped out of the pit and disposed of in a state authorized disposal site and the cuttings are buried. Wells would be drilled by rotary drilling using mud as the circulating medium. Mud pumps would be used to force mud down the drillpipe, thereby forcing the rock cuttings out the wellbore. Water would normally be from a well drilled on the site, however, water could be pumped to the site from a local pond, stream or lake through a pipe laid on the surface. Approximately 1500 barrels of drilling mud would be typically kept on the location. If a tract is adjacent to a producing field and water production will be expected during the life of the field, separation, dehydration and other production processing may be necessary. Construction of facilities off the Federal lease may be needed to handle this processing. Some processing or temporary storage may be necessary on site.

During well pad construction, the topsoil is stockpiled to be used during restoration activities. If the well is successful, the drill pad would be reduced to about 100' x 100' with the remaining surface area, including the reserve pit, re-graded and restored as per the BLM and surface owner requirements. A Lease Notice in these proposed leases encourages the use of non-invasive cover plants during all restoration and stabilization activities. Final seed mixtures and plantings are determined with recommendations from BLM with approval of the land owner. The remaining 100' x 100' pad is maintained for the life of the well. The life of a productive well may be 25 years. Following abandonment, the pad is subject to the same restoration parameters.

The following information on the federal mineral tracts is based on information collected during site visits conducted in 2010, aerial photographs, and topographic maps. Mitigation methods for potential negative impacts are listed in Appendix B as Lease Stipulations and Lease Notices. These recommended Lease Stipulations and Notices have been developed to provide general habitat protection and setbacks to exclude sensitive habitats from oil and gas development. Recommended mitigation for the proposed action is suggested as stipulations for freshwater aquatic habitat, cultural resources and tribal consultations, endangered species and special plant species (Appendix B). Additional surveys may be required for special status species after site-specific proposals have been received by BLM during the development phase.

No Action

Under the No Action Alternative, the request to offer the proposed tract for oil and gas lease would be denied. Potential economic benefits of production from this lease would be jeopardized.

CH. 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

EOI #817, 841 and EOI #856 are located in Bossier Parish which is located in northwest Louisiana and is entirely within the West Gulf Coastal Plain Ecoregion within the Coastal Plain Province. The legal descriptions for the nominated parcels are: T15N, R11W, Sec. 2, NWNE, Lots 6 and 8 (79.48 acres) (EOI #817), T16N, R10W, Sec. 18, S2SW (80 acres) (EOI #841), and T17N, R12W, Sec. 29, Part of NE (11.59 acres) (EOI #856), Louisiana Meridian, Bossier Parish, Louisiana. (Appendix A).

EOI #817

Interstate 71 is < 2 miles west of this 79.48 acre parcel. The parcel is located off of a gravel road that was recently built as an access road for a well pad being constructed just west of the northwest corner of the tract. An ATV trail runs along the northern boundary. The northwest 20 acres and southwest 20 acres of this parcel have been cleared within the last 5 years and is in early successional stages. This area contains some small trees (< 10 ft tall) and shrubs. Loggy north/south direction through the floodplain area west of the Bayou. A bald cypress (Taxodium NWNE and borders a portion of Loggy Bayou Wildlife Management Area (WMA). Surrounding the cypress swamp to the north and west is a marsh area.

EOI #841

This 80 acre parcel is located < 5 miles east of Interstate 71 and < 0.5 miles west of Lake Bistineau. A paved road runs from the southwest corner to the northeast corner of the SWSW and along the northern boundary of the SESW. Approximately 5 acres of the SWSW and 25 acres of the SESW is cleared for houses and pastures. The remaining portions of the tract contain a mixed hardwood/pine forest.

EOI #856

This 11.59 acre tract borders Highway 612. A dirt road runs south from the highway and ends at a cement square $\sim 10 \times 15 \times 2$ ft. The parcel contains a mixed hardwood forest and is surrounded on all sides by cleared land.

Description of Project Area

Based on review of the elements listed on the JFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

The Clean Air Act of 1970, as amended, requires the establishment of National Ambient Air Quality Standards (NAAQS). Both primary and secondary standards are now in effect. Primary standards define levels of air quality that the Administrator of the Environmental Protection Agency (EPA) judges to be necessary, with an adequate margin of safety, to protect the public health. Secondary standards define levels of air quality that the Administrator of the EPA judges to be necessary to protect the public from any known or anticipated adverse effects of a pollutant. The NAAQS pollutants are monitored in Louisiana by the Louisiana Department of Environmental Quality (LDEQ). These include carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, total suspended particulate, particulate matter less than 10 microns, and lead. (LDEQ) indicate that ambient air quality is within the standards, except in the Baton Rouge area where air quality is in nonattainment for ozone (2008).

Environmental Justice

Title IV of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

Cultural Resources

EOI #817 and #856

There are no known historic properties (36 CFR 800.16(1)) on the tract. However, the tracts have not been surveyed for cultural resources. There are known sites in the vicinity of the proposed lease. These tracts may have sites that would contribute important information about our country's prehistory.

EOI #841

A review of the Louisiana Division of Archaeology site files shows sites within one mile of the proposed lease sale. Based on information contained in the Louisiana SHPO site files their eligibility for listing on the National Register of Historic Places has not been determined. There have been some cultural resource surveys in the area. The tracts may have sites that would contribute important information about our country's prehistory.

Native American Religious Concerns

Federally recognized Native Americans have been contacted about this proposed undertaking. However, currently, there are no known sites used by Native Americans for religious purposes. There are no known Sacred Sites or traditional cultural properties on these tracts. If any such sites are present, access would be by an agreement between the landowner and the Native

Americans. The BLM has no authority over access to these tracts. The BLM's responsibility is limited to the area of surface disturbance if or when a proposal for development is submitted.

Invasive/Exotic Species

There are a number of non-native species that are considered invasive in Louisiana and are monitored by the Louisiana State University (LSU) Ag Center. The following provides a list of some of the common invasive species that can be found in Louisiana:

COMMON NAME	SCIENTIFIC NAME	DESCRIPTION Aquatic invader. Identified within bottomland	
Alligator weed	Alternanthera philoxeroides		
Chinese tallow tree	Triadica sebifera	nardwood forest habitat.	
	17 Maica Sebijera	Forest invader. Identified in forested habitats.	
Common salvinia	Salvinia minima	Aquatic invader. Prefers slow-moving fresh water habitats.	
Hydrilla ———————————————————————————————————	Hydrilla verticillata	Aquatic invader. Prefers slow-moving water habitats. Aquatic invader. Prefers wetlands and calm waterways.	
Water hyacinth Source: LSU, 2004; USL	Eichhorinia crassipes		

No exotic species were observed on the nominated parcels during the site visits conducted on May 13, 2010.

Soils

EOI #817

There are 5 soil types in this parcel: Bossier clay, frequently flooded; Buxin clay, frequently flooded; Moreland clay, 0-1% slopes; Moreland clay, occasionally flooded; and Moreland clay, frequently flooded. Buxin clay comprises 73% of the tract, Bossier clay comprises 3% of the tract, and Moreland clay comprises the rest (~23%) of the tract. Buxin and Bossier are both found on alluvial flats with a parent material of clayey alluvium. They are both poorly drained with a moderate available water capacity. Moreland clay is also commonly found on alluvial plains, with a parent material of red river clayey alluvium. It is somewhat poorly drained with a high available water capacity.

EOI #841

There are 5 soil types in the parcel: Ashford silt clay, 0-1% slopes; Gore silt loam, 1-5% slopes; Gore silt loam, 5-12% slopes; Kolin silt loam, 1-5% slopes; Wrightsville silt loam, 0-1% slopes. Ashford silt clay comprises about 11% of the tract, Gore silt loam, 1-5% comprises about 8%, Gore silt loam, 5-12% comprises about 24%, Kolin silt loam comprises about 8%, and Wrightsville silt loam comprises 49% of the tract. Ashford is commonly found on alluvial flats and its parent material is clayey alluvium. It is poorly drained with moderate available water capacity. Gore silt loam is commonly found on the shoulder and backslopes of stream terraces and its parent material is clayey alluvium. It is moderately well-drained with a moderate available water capacity. Kolin silt loam is commonly found on stream terraces and its parent material is loamy over clayey alluvium. It is moderately well-drained with a high available

water capacity. Wrightsville silt loam is commonly found in depressions and its parent material is silty over clayey alluvium. It is poorly drained with a high available water capacity.

EOI #856

There are three soil types on this parcel: Armistead clay, 0-1% slopes, Buxin clay, 0-1% slopes, and Caspiana silt loam, 0-1% slopes. Armistead comprises approximately 30% of the tract and occurs in the southern half and along the northern boundary. It usually occurs on natural levees. Its parent material is clayey alluvium over loamy alluvium. Armistead is somewhat poorly drained with a high available water capacity. Buxin comprises about 4% of the tract and occurs in the northwest corner. It usually occurs on alluvial flats. Its parent material is clayey alluvium. Buxin is poorly drained with a moderate available water capacity. Caspiana comprises approximately 66% of the tract. It usually occurs on natural levees. Its parent material is loamy alluvim. Caspiana is well drained with a very high available water capacity.

Special Status Species

The following is a list of threatened, endangered, and special concern animal and plant species and communities documented in Bossier Parish, LA by the Louisiana Natural Heritage Program.

Scientific Name	Common name	State Rank	Global	State	Federa
Aimophila aestivalis	Bachman's Sparrow		Rank	Status	Status
Ammocrypia clara	Western Sand Darter	S3	G3		
Anemone berlandieri	ten petal thimbleweed	S2	G3		
Bostomland hardwood forest	Bottomland Hardwood Forest	\$2 \$4	G4? G4G5		1
Calcareous forest	Calcareous Forest				1
Camassia scilloides	Atlantic Camas	S2	G2?Q		1
Carex decomposita	Cypress-knee Sedge	S3	G4G5		
Carex meadii	Mead's Sedge	S3	G3		
Cirsium engelmannii	Circium Tomai	S3	G4G5		
Coreopsis palmata	Cirsium Terraenigrae Stiff Tickseed	SU	G4		
Cypress Swamp	Commended	S2	G5		
Cypress-Tupelo Swamp	Cypress Swamp	S4	G4G5		
Cypripedium kentuckiense	Cypress-Tupelo Swamp	S4	G3G5		
Dodecatheon meadia	Southern Lady's-slipper	SI	G3		
Eleocharis wolfii	Common Shooting star	S2	G5		
Erythronium albidum	Wolf Spikerush	S3	G3G4		
Forested seep	White Trout-lily	S2	G5		
Forestiera ligustrina	Forested seep	S3	G3		
Haliaeetus leucocephalus	Upland Swamp Privet	S3	G4G5		
Hardwood slope forest	Bald Eagle	S2N, S3B	G5		
Helenium campestre	Hardwood slope forest	S3S4	G2G3	Endangered	Delisted
Houstonia -	Old Field Sneezeweed	SI	G4 G4		
Houstonia purpurea var calycosa	Purple Bluet	S2	G5T5		
sotria verticillata	Large Whorled Pagonia	S3	G5 G5		
Koeleria macrantha	June grass	Si	G5		
Lindheimera texana	Texas Yellow-star	SI	G5		
Marshallia caespitosa var. signata	Barbara's Buttons	SI	G4T4		
Mirabilis albida	Pale Umbrealla-wort	\$2	G5		
Mixed hardwood loblolly forest	Mixed hardwood loblolly forest	S4	G3G4		
Monotropa hypopithys	American pinesap	S2	G5		

Morse clay calcareous prairie Mustela frenata	Morse clay calcareous prairie	7 61			
Nemachilia	Long-tailed Weasel	SI	GIG2		
Nemastylis geminiflora	Prairie Pleat-leaf	S2S4	G5		
Oenothera pilosella ssp. Sessilis	Meadow Evening Primrose	S2S3	G4		1
Oenothera rhombipetala	Four-point Evening Primrose	S1?	G5T2Q		
Phlox pilosa ssp. Ozarkana	Downy Phlox	S1?	G4G5		
Picoides borealis	Red-Cockaded Woodpecker	S2?	GSTNR		
Quercus arkansana	Arkansas Oak	S2	G3	Endangered	LE
Quercus macrocarpa	Burr Oak	S2	G3		LL
Ratibidia pinnata	Yellow Coneflower	SI	G5		
Rudbeckia triloba	Three-lobed Coneflower	S2?	G5		
Sanguinaria canadensis	Bloodroot	S3	G5		
Silene stellata	Starry Campion	S2	G5		
Small Stream Forest	Small Stream Forest	S2	G5		
Solanum dimidiatum	Western Horse-nettle	S3	G3		
Solidago auriculata	Eared Goldenrod	S2S3	G5		
Sterna antillarum athalassos	Interior Least Tern	S4	G4		
Symphyotrichum drummondii var. texanum	Texas Aster	SIB SI?	G4T2Q G5TNR	Endangered	PS:LE
Taenidia integerrima	1 V II - 51		GSTNR		
Thalictrum revolutum	Yellow Pimpernell	S2	G5		
	Windflower	SI	G5		
Trillium recurvatum	Reflexed Trillium	47377.9	03	1	
Triosteum angustifolium		S2	G5		
	Yellowleaf Tinker's-weed	S2	1.52		
Triphora trianthophora		32	G5		
	Nodding Pagonia	S2	G3G4		
Viola pubescens	Downy Yellow Violet	.51.51	0304	i	
ireo gilvus		SI	G5		
	Warbling Vireo	CID	A7650		
Vaterbird Nesting Colony		SIB	G5	.	
	Waterbird Nesting Colony	SNR	GNR		
et Hardwood Flatwoods	Wet Hardwood Flatwoods	1.555.191	JIVK		
igadenus nuttallii	Caracita in the caracita in th	S2S3	G2G3		
Swaenus nuttatiti	Nuttall Death Camus	SI	G5		

None of these species were observed during the site visit conducted on May 13, 2010.

The red-cockaded woodpecker is both federally and state-listed as endangered. Appropriate habitat for the woodpecker includes mature pine forests and mixed pine-upland hardwood forest with little or no hardwood midstory. The average cavity tree age ranges from 60 to 126 years for longleaf pine, 70 to 90 years for loblolly pine, and 75 to 149 years for shortleaf pine. The woodpeckers forage in habitat consisting of pine stands with an average DBH of 9 inches or greater, and in pole stands with 4 to 9 inches DBH. There are fewer than 400 known colonies of the red-cockaded woodpecker in Louisiana, most of which are in Kisatchie National Forest (LDWF, 2004a). None of the nominated parcels have adequate habitat to support woodpecker colonies.

The interior least tern breeds on sand bars of rivers and lakes. In Louisiana, the interior least tern nests on sand bars associated with the Mississippi River and the upper portion of the Red River. There are no documented winter records for this species in Louisiana (LDWF, 2004a). The nominated parcels do not contain suitable habitat for this species.

De-listed on June 28, 2007, the Bald Eagle continues to be protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act. Bald Eagles typically build their nests in tall trees or cliffs that offer unrestricted flight patterns and visibility, within 1 to 2 miles of large water bodies. In Louisiana, the Bald Eagle nests primarily in southeastern coastal parishes, and is occasionally observed on large lakes in the northern or central parishes during the winter. The project sites do not provide suitable foraging or preferred roosting habitat for

Migratory Bird Species of Concern

EOI #817

The following provides a list of migratory birds of conservation concern with the potential to occur on EOI #817 based on species preference for bottomland hardwood or swamp forests:

Species	Habitat Suitability
Little blue heron	Suitable
Swallow-tailed kite	
Red-headed woodpecker	Optimal
Acadian flycatcher	Optimal
Wood thrush	Optimal
Prairie warbler	Optimal
Cerulean warbler	Marginal
Prothonotary warbler	Suitable
Worm-eating warbler	Optimal
Swainson's warbler	Suitable
Vantual Warbler	Optimal
Kentucky warbler	Optimal
Louisiana waterthrush	Marginal

Source: The Land Manager's Guide to the Birds of the South. Paul B. Hamel. 1992.

Birds of Conservation Concern. U.S. Fish and Wildlife Service. 2002.

Birds of Eastern and Central North America. Roger Tory Peterson. 1980.

EOI #841

The following provides a list of migratory birds with the potential to occur on EOI #841 based on species preference for mixed hardwood/pine forests.

Species	Habitat Suitability
American swallow-tailed kite	Marginal
Chuck-will's-widow	Optimal
Red-headed woodpecker	Marginal
Scissor-tailed flycatcher	Marginal
Brown-headed nuthatch	Marginal
Wood thrush	Suitable
Bell's vireo	Marginal
Prairie warbler	Marginal
Worm-eating warbler	Marginal

Kentucky warbler	Marginal-
Harris's sparrow	
Source: The Land Manager's Guid	Marginal

Source: The Land Manager's Guide to the Birds of the South. Paul B. Hamel. 1992.

Birds of Conservation Concern. U.S. Fish and Wildlife Service. 2002. Birds of Eastern and Central North America. Roger Tory Peterson. 1980.

EOI #856

The following provides a list of migratory birds with the potential to occur on EOI #841 based on species preference for oak/hickory mixed hardwood forests.

Species	Suitabille Car
Chuck's will's widow	Suitability of Habitat
Red-headed woodpecker	Marginal
Acadian flycatcher	Suitable
Scissor-tailed flycatcher	Suitable
Bell's Vireo	Marginal
	Marginal
Woodthrush	Optimal
Cerulean warbler	Suitable
Worm-eating warbler	Suitable
Kentucky warbler	
Louisiana waterthrush	Suitable
Harris' sparrow	Suitable
Orchard Oriole	Marginal
e: The Land Manager's Guide to the	Marginal

Source: The Land Manager's Guide to the Birds of the South. Paul B. Hamel. 1992.

Birds of Conservation Concern. U.S. Fish and Wildlife Service. 2002. Birds of Eastern and Central North America. Roger Tory Peterson. 1980.

Wildlife and Vegetation

EOI #817

Interstate 71 is < 2 miles west of this 79.48 acre parcel. This parcel is located off of a gravel road that was recently built as an access road for a well pad being constructed just west of the northwest corner of the tract. An ATV trail runs along the northern boundary. The northwest 20 acres and southwest 20 acres of this parcel has been cleared within the last 5 years and is in early successional stages. This area contains some small trees (< 10 ft tall) and shrubs. Dominant species include; honey locust (Gleditsia triacanthos) and willow oak (Quercus phellos). Loggy Bayou runs through the eastern portion of the northeastern 40 acres. An ATV trail runs in a north/south direction through the floodplain area. Large black willow (Salix nigra) and hornbeam (Ostrya virginiana) trees are the primary tree species. Further from the bayou, dominant tree species include water oak (Q. nigra) and willow oak. A bald cypress swamp/water tupelo brake is located in the southern half of the NWNE and borders portions of Loggy Bayou WMA. Surrounding the cypress swamp to the north and west is a marsh area containing primarily grasses and sedges and some small shrubs including honey locust.

A cottonmouth (Agkistrodon piscivoris leucostoma) and several deer (Odocoileus virginiana) and armadillos (Dasypus novemcinctus) were observed during the site visit conducted on May

13, 2010. Other mammal species likely to occur on the tract due to their preferences for bottomland hardwood forests include the: least shrew (Cryptotos parva), Rafinesque's big-eared bat (Corynorhinus rafinesquii), southeastern myotis (Myotis austroriparius), Seminole bat (Lasiurus seminolus), Eastern woodrat (Neotoma floridana), coyote (Canis latrans), northern river otter (Lontra canadensis), American mink (Mustela vison), and swamp rabbit (Sylvilagus aquaticus). Bird species that could occur include: swallow-tailed kite (Elanoides forficatus), Mississispipi kite (Ictinia mississippiensis), bachman's warbler (Vermivora bachmanii), red-shouldered hawk (Buteo lineatus), yellow-billed cuckoo (Coccyzus americanus), and barred owl (Strix varia). Amphibians and reptiles that likely occur are: marbled salamander (Ambystoma opacum), southern dusky salamander (Desmognathus auriculatus), eastern cricket frog (Acris elegans), river cooter (Pseudemys consinna), red-eared slider (Trachemys scripta elegans), yellow-bellied water snake (Nerodia erythrogaster flavigaster), and diamondback water snake (Nerodia rhombifer rhombifer).

EOI #841

This 80 acre parcel is located < 5 miles east of Interstate 71 and < 0.5 miles west of Lake Bistineau. A paved road runs from the southwest corner to the northeast corner of the SWSW and along the northern boundary of the SESW. Approximately 5 acres of the SWSW and 25 acres of the SESW is cleared for houses and pastures. The remaining portions of the tract contains a pine/mixed hardwood forest with the following dominant species; box elder (Acer negundo), black jack oak (Q. marilandica), post oak (Q. stellata), loblolly pine (Pinus taeda), sweetgum (Liquidambar styraciflua), southern red oak (Q. falcata), and willow oak, with trees ranging in size from 70 – 100 ft.

Mammal species likely to occur on the tract due to their preferences for mixed hardwood/pine forests include: white-tailed deer (Odocoileus virginiana) Virginia opossum (Didelphis virginiana), southern short-tailed shrew (Blarina caroliniensis), big brown bat (Eptesicus fuscus), evening bat (Nycticeius humeralis), and golden mouse (Ochrotomys nuttalli). Bird species that likely occur on this tract include: chuck-will's-widow (Caprimulgus carolinensis), great crested flycatcher (Myiarchus crinitus), blue jay (Cyanocitta cristata), and Carolina chickadee (Poecile carolinensis). Reptile and amphibian species likely to occur include: southern leopard frog (Rana utriculara), northern cricket frog (Acris crepitans crepitans), southern copperhead (Agkistrodon contortrix phaeogaster), speckled kingsnake (Lampropeltis getula holbrooki), and box turtle (Terrapene carolina triunguis).

EOI #856

This 11.59 acre tract borders Highway 612. A dirt road runs south from the highway and ends at a cement square ~ 10 x 15 x 2 ft. The parcel contains a mixed hardwood forest and is surrounded on all sides by cleared land. Dominant tree species include; dogwood (Cornus florida), American hornbeam, sweetgum, southern red oak, and boxelder.

Mammal species likely to occur on the tract due to their preferences for mixed hardwood forests include: white-tailed deer, Virginia opossum, big brown bat, red bat (Lasiurus borealis) and golden mouse. Bird species that likely occur on this tract include: red-bellied woodpecker (Melanerpes carolinus), hairy woodpecker (Picoides villosus), tufted titmice (Baeolophus bicolor), wood thrush (Hylocichla mustelina) and scarlet tanager (Piranga olivacea). Reptile and

amphibian species likely to occur include: northern cricket frog, southern copperhead, and speckled kingsnake.

Wastes, Hazardous or Solid

During the on site inspections, no hazardous or solid waste disposal site were found on the lease tracts.

Water Quality, Surface/Ground

Surface Water Quality

The most frequently cited suspected causes of impairment for all water bodies combined in Louisiana are fecal coliforms, primarily from septic tanks and municipal sewage treatment systems; low dissolved oxygen from sewage, agriculture, or natural causes; sediment-related problems such as turbidity, suspended solids, and siltation caused by agriculture or natural causes; and mercury related to fish consumption advisories, due primarily to atmospheric deposition of mercury on the watershed. Many of the suspected sources of water quality impairment are known collectively as nonpoint source pollution (LDEQ 2006).

Many of Louisiana's water bodies remain impaired for the designated use of fish and wildlife propagation. This is largely because there are many possible causes and sources of impairment impacting this use. Any one of these causes can result in a water body being considered impaired for fish and wildlife propagation. There are more than 35 different suspected causes of impairment reported as impacting fish and wildlife propagation. With the exception of mercury, all of the top eight suspected causes of impairment generally can be related to what are known as nonpoint sources of pollution. The remaining causes of impairment generally are related to various forms of industry, small business, or municipal sources (LDEQ 2006).

There are no obvious sources of pollution for Loggy Bayou located on EOI #817.

Ground Water Quality

The results of the Baseline Monitoring Program indicate that water quality is good in Louisiana aquifers. Although the overall quality of the state's ground water is good, there are more than 200 sites where active investigation or remediation of contaminated ground water is taking place, not including underground storage tank or Superfund sites. There also were 14 public water supply systems impacted by VOC contamination of ground water between 1989 and 2002 (GWPC 2009b).

The proposed sites are located within the Mississippi embayment aquifer system which consists of 6 aquifers that crop out as an arcuate band of poorly consolidated to unconsolidated, bedded sand, silt and clay. Geologic units of the aquifer system range from Late Cretaceous to middle Eocene in age. These tracts are located within the Middle Claiborne aquifer. Aquifers of the Mississippi embayment aquifer system consist of an interbedded sequence of poorly consolidated fluvial, deltaic, and marine deposits in which diagenesis or postdepositional geochemical processes have not greatly altered the original pattern of permeability. The hydraulic conductivity of the unconsolidated to poorly consolidated sediments that compose the aquifers of the Mississippi embayment aquifer system does not appear to have been greatly

reduced by cementation or compactions. Consequently, the distribution of hydraulic conductivity and transmissivity of the Mississippi embayment aquifer system can be inferred from maps of sediment lithofacies, if a direct correlation between sediment type and aquifer permeability is

Wetlands/Riparian Areas/Floodplains

Loggy Bayou runs through the eastern half of EOI# 817. There are no water bodies on EOI #841 or #856.

Energy Policy

The area contains no features related to energy development, production, supply or distribution.

Ch. 4 - ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Introduction

This chapter assesses potential environmental consequences associated with direct, indirect, and cumulative effects of the Proposed Action and alternatives.

Based on review of the elements listed on the JFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, impacts for the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

If the lease is developed for oil and gas production, impacts to air quality associated with construction, drilling, production and abandonment could come from the following sources: (1.) Fugitive dust generated from vehicle traffic along dirt or gravel roads during transportation of employees and equipment; (2.) Exhaust from heavy machinery, vehicles, compressors, drilling rig prime movers, generators, and other internal combustion engines used during site construction, drilling, flowline installation, production, and abandonment and other production equipment such as pumps, separators, heater treaters, boilers; and (3.) Fugitive volatile organic compounds (VOC) escaping from leaky pipe valves, flanges, and storage tanks during loading of crude on to tank trucks, and accidental releases/spills of hydrocarbons.

Fugitive dust created during road, drill pad, flowline construction, and abandonment would increase suspended particulates in the air. Also, the regulated air pollutants nitrogen oxides (NOx), sulfur oxides (SOx), VOC, and particulates (Pm) will be emitted from the above referenced sources. These conditions could temporarily impact the ambient air quality in the

immediate vicinity of the leased area. The generation of suspended particulates, a regulated pollutant, could cause a temporary and localized disturbance to people who work in the area. However, the impacts from the combined frequency and volume of fugitive dust and regulated air pollutants are expected to be minimal, very localized, and of short duration.

Environmental Justice

There is no adverse human health and environmental effects anticipated from potential development on minority and low-income populations in the areas surrounding this tract.

Cultural Resources and Native American Religious Concerns

Cultural resource surveys have not been conducted, therefore direct and indirect impacts may occur to cultural resources or to a potentially sacred Native American religious site if there is ground disturbance. Direct impacts are those such as completely destroying a site by bulldozing the area and workers picking up artifacts. Indirect impacts are those such as erosion or compaction of the soil on the site. However, if sites are located and recorded before ground disturbance begins, these impacts can be avoided or mitigated. A Stipulation regarding cultural resources and Native American religious concerns applies to this lease (Appendix B) and is applicable for all the proposed parcels. The Stipulation states that the BLM will not approve any ground disturbing activities that may affect historic properties and/or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native

Invasive/Exotic Species

Surface disturbing activities have the potential to introduce or promote the spread of invasive, nonnative plant species. Impacts are dependent on the species planted during restoration activities and the management of the site during and following restoration. Revegetating areas after soil disturbance with competitive grasses greatly reduces the ability for invasive species to take hold in an area. Natural Resources Conservation Service recommends the mixture below for revegetation efforts in Louisiana: Blend #1 LA (weight in pure live seed or PLS lb/ac)

- Switchgrass 60% = 2.4 lb
- IL Bundleflower 20% = 2.4 lb
- Partridge Pea 15% = 1.2 lb
- Black-eyed Susan 3% = .03 lb
- Plains Coreopsis 2% = .02 lb

A Lease Notice/Best Management Practice regarding invasive/exotic species applies to this lease (Appendix B) and is applicable for all of the proposed parcels. The Lease Notice/Best Management Practice states that the use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites

will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas.

Soils

Well site and access road construction would have direct impacts to soils. These impacts would be limited to those areas where vegetation is removed and construction occurs. The direct impacts would be of two types: (1) physical removal, leveling and mixing of surface soils and (2) soil compaction. The first impact would be caused by site preparation for construction of the well pad, related structures, road construction, flowline construction and wind and water erosion after vegetation is removed. This would cause a mixing of soil horizons and cause a short term loss of soil productivity. The second impact, soil compaction, would be caused by vehicle and machinery travel. Compaction decreases air and water infiltration into the soil profile thus reducing soil productivity. The indirect impact would be that of erosion and siltation of drainages and streams. Prompt cultivation and re-vegetation of impacted soil areas should reduce the possibility of soil erosion thus preventing an increase of siltation into drainages or streams from run-off. Site specific conditions of approval would be developed prior to approval of an APD to address soil erosion.

Special Status Species

No special status species are known or expected to occur at these sites, due to a lack of suitable habitat so impacts from potential development will not occur. However, Stipulations and Lease Notices regarding endangered species applies to this lease (Appendix B) and is applicable for all the nominated parcels. The Stipulation states that the BLM may recommend modifications to exploration and development proposals to further the conservation and management objectives for threatened, endangered, or other special status plant or animal species or their habitat to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. The Lease Notice gives recommendations for disposing produced water in such a way as to protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species a second Stipulation applies to this lease and applies to all proposed parcels. The Stipulation states that all suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Migratory Bird Species of Concern

The lists of migratory birds that have the potential to occur on the proposed tracts are based on the presence of bottomland hardwood forests (EOI #817), pine/mixed hardwood forests (EOI #841), and oak/hickory mixed hardwood forests (EOI #856). Nesting and foraging habitat for

birds will be altered dramatically if forests are cut for oil and gas development. Many of the species with the potential to occur on these tracts could move to similar habitats in surrounding areas. After the well is put into production and during reclamation activities bird species diversity would be altered depending on successional stage of the site and adequacy of restoration efforts.

To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife a Lease Notice applies to this lease and applies to all proposed parcels. The Lease Notice provides recommendations regarding reserve pits, maximum design speeds for roads, and powerline construction to minimize effects on migratory birds.

Wildlife and Vegetation

The Reasonable Foreseeable Development Scenario (RFD) for EOI #817 predicts that 2 wells will be drilled from 1 pad. The total disturbance predicted would be 5.4 acres, with 5.74 acres disturbed for the well pad and pit, 0 acres for the access road, and 0.34 acres reclaimed (Appendix D). The RFD for EOI #841 predicts that 2 wells will be drilled from 1 pad. The total disturbance predicted would be 5.57 acres, with 5.74 acres disturbed for the well pad and pit, 0.17 acres for the access road, and 0.34 acres reclaimed (Appendix D). The RFD for EOI #856 predicts that 1 well will be drilled from 1 pad. The total disturbance predicted would be 6.26 acres, with 5.74 acres disturbed for the well pad and pit, 0.90 acres for the access road, and 0.34 acres reclaimed (Appendix D).

Many of the species expected to occur on these sites have broad habitat requirements and would continue to be found in a variety of habitats in the surrounding areas. Wildlife use of the sites after the wells are put into production would vary depending on vegetation and succession stage. Once put into production the well pads would be reduced in size and the reserve pits would be graded and seeded. The producing well sites would be subject to regular maintenance and inspection. Wildlife use of the sites is dependent on the adequacy of restoration. However, over the life of the wells up to 17.23 acres would be excluded from utilization by most wildlife

Wastes, Hazardous or Solid

The operations would typically generate the following wastes; (a) discharge of drilling fluids and cuttings into the reserve pits, (b) wastes generated from used lubrication oils, hydraulic fluids, and other fluids used during production of oil and gas, some of which may be characteristic or listed hazardous waste, and (c) service company wastes from exploration and production activities as well as containment of some general trash. Certain wastes unique to the exploration, development, and production of crude oil and natural gas have been exempted from Federal Regulations as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976. The exempt waste must be intrinsic to exploration, development or production activities and is not generated as part of a transportation or manufacturing operation. The drilling fluids, drill cuttings, and produced waters are classified as a RCRA exempt waste, and the proposed action would not introduce hazardous substances into the environment if they

are managed and disposed of properly under Federal, State, and local waste management regulations and guidelines.

Water Quality, Surface/Ground

Construction would cause some minor erosion and re-deposition of soil a short distance away from the construction area. Site specific conditions of approval would be developed prior to approval of an APD to protect surface water quality. This may include but is not limited to construction of ditches, berms, terraces or other similar structures. Areas not needed for production would be reclaimed and stabilized to control erosion.

Improper casing and/or cementation can result in contamination of ground water aquifers. The BLM requires that the operator must isolate freshwater-bearing formations and other usable water containing 10,000 ppm or less of total dissolved solids (TDS) and other mineral-bearing formations and protect them from contamination by using proper casings. In addition, the BLM requires lining the reserve and water pit with a suitable liner on a case-by-case basis.

Wetlands/Riparian Areas/Floodplains

No disturbance would be permitted within 250 feet of streams, rivers, wetlands or springs.

No Action

Under this alternative, the parcels within the proposed action would remain unleased at this point in time. It could be offered for leasing in the future, but may be subject to additional environmental analysis at that point in time. If the parcel was not leased there would be no direct impacts to the potential drill location and therefore no effects on all of the critical elements above except Cultural Resources and Native American Religious Concerns (see below). As compared to the proposed action, there would be less disturbance resulting from oil and gas related actions.

Cultural Resources

If the area is not leased and cultural resource surveys are not conducted, direct and indirect impacts may occur. Direct impacts are those such as completely destroying a site by "relic hunters" or by people picking up artifacts. Other direct impacts may be the mixing of layers in a site by plowing or the destruction of a site by land leveling. Indirect impacts are those such as after timber thinning or clear-cutting erosion of the remains of a site. Hunting activities may cause other impacts to the surface such as the deposition of spent ammunition shells and other items. However, the use of the property is the purview of the land owner, and any cultural resource site and its artifacts are the property of the land owner.

Native American Religious Concerns

Under this alternative, places of Native American Religious Practice could be impacted by activities of the landowner, unless there was a formal agreement between the landowner and the

Native American tribe. Direct impacts could be the destruction of a site, and an indirect impact could be the landowner placing a fee on the use of the area.

Cumulative Impacts

Cumulative impacts are the impacts to the environment which result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions. Since the proposed action would not authorize surface occupancy, no environmental impacts are anticipated on the lease. Hence, the proposed action will not contribute to the impacts to other past, present, or reasonable foreseeable actions. For Cultural Resources and Native American Religious Concerns this is dependent upon cultural resource surveys being conducted.

Energy Policy

Energy Policy Act of 2005 – Sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Title III: Oil and Gas

Subtitle B: Natural Gas

(Sec. 313) Designates FERC as the lead agency for coordinating federal permits and other authorizations and compliance with the National Environmental Policy Act of 1969 (NEPA). Directs FERC to establish a schedule for all federal authorizations.

Subtitle C: Production

(Sec. 322) Amends the Safe Drinking Water Act to exclude from the definition of underground injection the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil or gas, or geothermal production activities.

Subtitle F: Access to Federal Lands

(Sec. 361) Requires the Secretary of the Interior to perform an internal review of current federal onshore oil and gas leasing and permitting practices.

(Sec. 364) Amends the Energy Act of 2000 to revise the requirement that the Secretary of the Interior, when inventorying all onshore federal lands, identify impediments or restrictions upon oil and gas development.

(Sec. 366) Amends the Mineral Leasing Act to set deadlines for an expedited permit application

(Sec. 368) Prescribes guidelines governing energy right-of-way corridors on federal land. Directs the Secretaries of Agriculture, of Commerce, of Defense, of Energy, and of the Interior (the Secretaries), in consultation with FERC, states, tribal or local government entities, affected utility industries, and other interested persons, are directed to consult with each other and to: (1) designate corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land in the 11 contiguous Western States; (2) incorporate the

designated corridors into the relevant energy land use and resource management or equivalent plans; and (3) ensure that additional corridors are promptly identified and designated. (Sec. 371) Amends the Mineral Leasing Act to cite conditions for the reinstatement of oil and gas leases terminated for certain failure to pay rentals.

Subtitle G: Miscellaneous

(Sec. 390) States that action by the Secretary of the Interior in managing the public lands, or the Secretary of Agriculture in managing National Forest System Lands, with respect to certain oil or gas drilling related activities shall be subject to rebuttable presumption that the use of a categorical exclusion under NEPA would apply if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas.

CH. 5 - LIST OF AGENCIES AND PERSONS CONSULTED

The following agencies/tribes were contacted (Appendix C):
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe of Louisiana
Caddo Nation of Oklahoma
Chickasaw Nation
Alabama Coushatta Tribe of Texas
Coushatta Indian Tribe
Alabama-Quassarte Tribal Town
Chitimacha Tribe of Louisiana
Thlopthlocco Tribal Town
Muscogee (Creek) Nation of Oklahoma
Choctaw Nation of Oklahoma
Mississippi Band of Choctaw Indians
Quapaw Tribe of Oklahoma

List of Preparers

Specialist Name

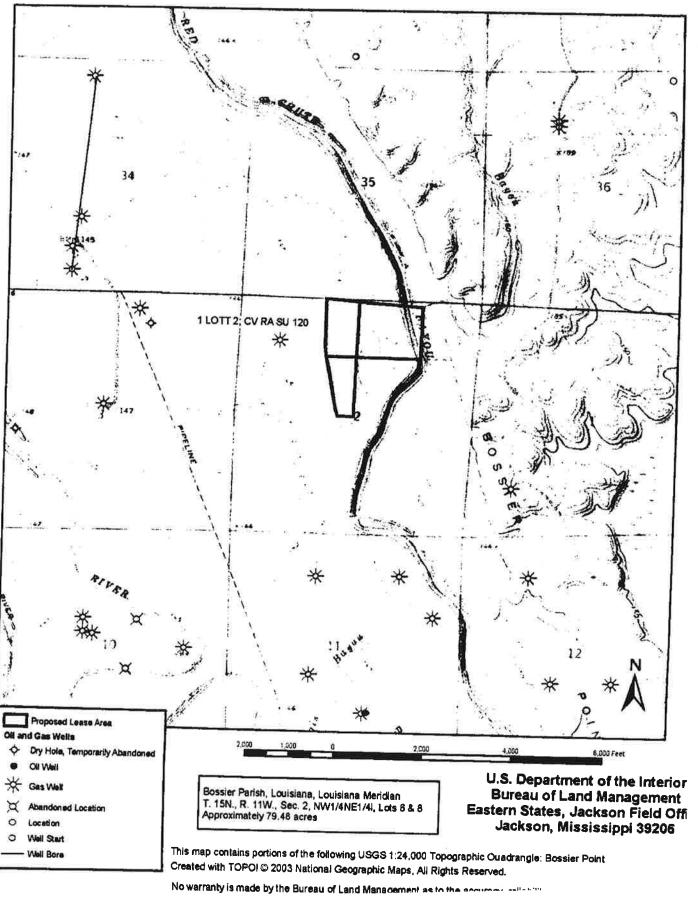
Alison McCartney John Sullivan Gary Taylor

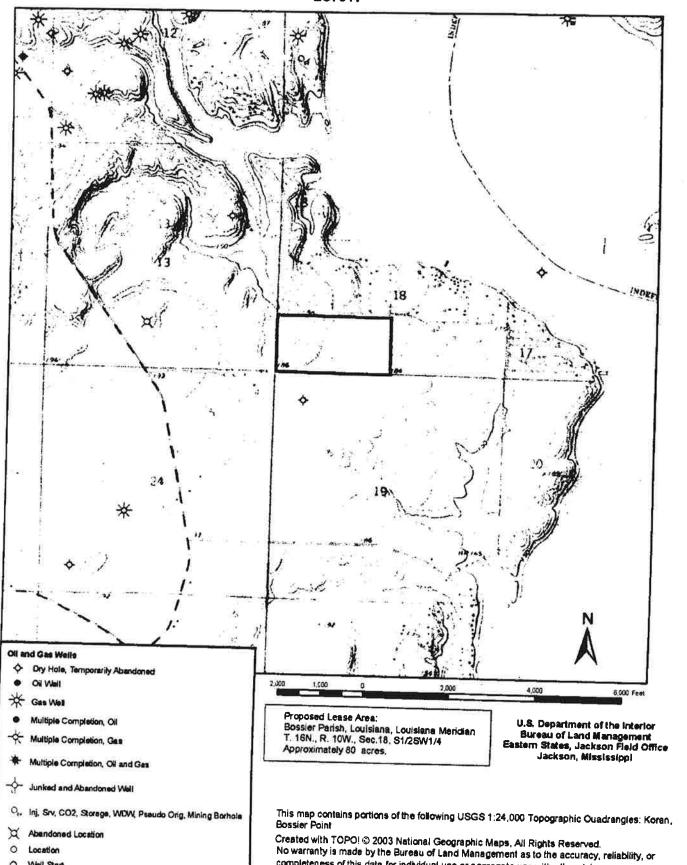
Title, Organization

Natural Resource Specialist Archeologist Planning and Environmental Coordinator

APPENDIX A

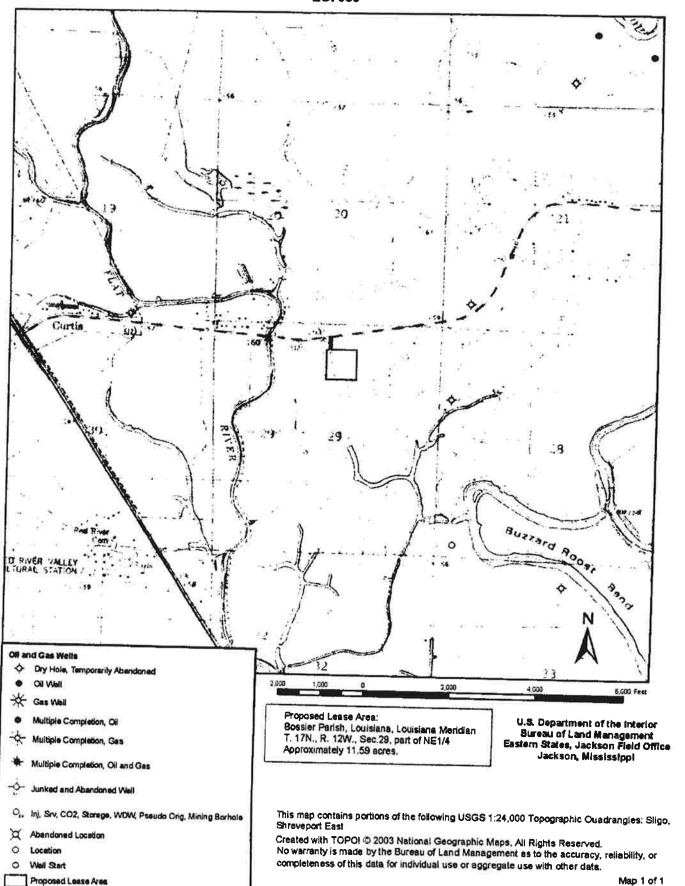
Proposed Lease Tract Locations





Well Start Proposed Lease Area completeness of this data for individual use or aggregate use with other data.

Map 1 of 1



APPENDIX B

Proposed Lease Stipulations and Lease Notices

Stipulations

The following stipulations apply to all three EOIs:

Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. These obligations may include a requirement that you provide a cultural resources survey conducted by a professional archaeologist approved by the State Historic Preservation Office (SHPO). If currently unknown burial sites are discovered during development activities associated with this lease, these activites must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Endangered Species

Stipulation: The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. '1531 et seq., including completion of any required procedure for conference or consultation.

Exception: None

Modification: None

Waiver: None

Sensitive Plant Species

<u>Stipulation (CSU):</u> All suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified

botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Objective: To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and in coordination with State agencies. Modification: The stipulation may be modified if it is determined that a portion of the lease area does not contain sensitive plant species habitat.

Waiver: The stipulation may be waived if, based on field surveys, it is determined that the lease area does not contain sensitive plant species habitat.

The following stipulation applies to EOI #817:

Freshwater Aquatic Habitat

Stipulation (NSO): No surface occupancy or disturbance, including discharges, are permitted within 250 feet of a river, stream, wetland spring, headwater, wet meadow, wet pine savanna, pond, tributary, lake, coastal slough, sand bar, vernal pools, calcareous seepage marsh, or small, marshy calcareous stream. If the slope exceeds 10 percent, the buffer may be extended to 600 feet to provide adequate protection for aquatic habitats and associated species.

Objective: To protect the water quality of watersheds and natural stream substrate and morphology and to avoid potential impacts to aquatic species and their habitat.

Exception: An exception may be granted if the operator agrees to 1) span creeks, rivers, wetlands, and floodplains by attaching pipelines to bridges; 2) directionally drill wells and pipelines from upland sites under creeks, rivers, other waters, and wetlands or3) implement other measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The buffer may be reduced if the adjacent waterway has been surveyed for 100 yards upstream and 300 yards downstream of the site, and the results document the lack of suitable/occupied/critical habitat for listed species which may be affected by the project, as determined by the BLM and USFWS.

Waiver: None

Lease Notices/Best Management Practices

The following Lease Notices/Best Management Practices apply to all three EOIs:

Disposal of Produced Water

Objective: To protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

The preferred method for disposal of produced water will be through reinjection to a permeable formation with total dissolved solids (TDS) content higher than 10,000 milligrams per liter (mg/L) where the aquifer is not hydrologically connected to caves, wetlands, or surface water. In Alabama, the injection of produced water is regulated by the Alabama State Oil and Gas Board. In Mississippi, the injection of produced water is regulated by the Mississippi Department of Environmental Quality (MDEQ) and the Mississippi Oil and Gas Board.

If reinjection is not practicable, closed-containment treatment systems should be used to contain and treat produced water for those contaminants and sediments exceeding State standards or EPA criteria. Salt content of any surface ponds for produced water, pigging pits, or other fluids must be less than 7,500 microsiemens per centimeter (μ S/cm). If surface pond salt content is greater than 7,500 μ S/cm, if other bird toxicity is present, or if the surface exhibits sheen, then the ponds must be netted or covered with floating balls, or other methods must be used to exclude migratory birds.

Produced waters may be released into an impounded reservoir if there is documentation that the discharge site and affected waters do not support special status species, are not designated critical habitat, and State and Federal water quality standards/criteria are met. Produced waters may be released into a stream/river if the discharge site and affected waters have been recently surveyed and lack special status species, or if the applicant conducts approved surveys documenting the absence of special status species, State and Federal water quality standards/criteria are met, and a National Pollution Discharge Elimination System (NPDES) permit is obtained. The applicant should be aware that some species can be surveyed only during certain times of the year.

Produced waters may be released into a stream/river if the applicant can document that the produced waters would not adversely affect special status species. Water quality tests would be conducted on stream segment(s) or other locations proposed as discharge points, volumes to be released, and any settling ponds or other treatments proposed to improve wastewater quality. The water quality test data, any monitoring proposed, and other available information about general coalbed methane effluent characteristics (from published or unpublished literature) shall be reviewed by USFWS. Information about timing of the releases in relation to low water and other planned BMPs would also be required. Testing would include analysis of the discharge site and affected waters for chemical oxygen demand (COD), conductivity, total suspended solids (TSS), As, Hg, Se, and polycyclic aromatic hydrocarbons (PAH). Dissolved oxygen and ammonia standards/criteria must be met in bottom waters if they support listed benthic or epibenthic species. If a special status species has been documented to be more sensitive than State/Federal standards/criteria, site-specific standards for that species may be imposed. Calculations would be

based on State standards (or Federal CCC criteria for protection of freshwater aquatic life when the State has not determined a standard for these parameters).

Migratory Birds and Federally Listed Wildlife

Objective: To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife.

Any reserve pit that is not closed within 10 days after a well is completed and that contains water must be netted or covered with floating balls, or another method must be used to exclude migratory birds.

Maximum design speed on all operator-constructed and maintained (non-public) roads shall not exceed 25 miles per hour to minimize the chance of a collision with migratory birds or other listed wildlife species.

All powerlines must be built to protect raptors and other migratory birds, including bald eagles, from accidental electrocution, using methods detailed by the Avian Power Line Interaction Committee (APLIC 2006)

Perching and Nesting Birds and Bats

Objective: To prevent birds and bats from entering or nesting in or on open vent stack equipment.

Open vent stack equipment, such as heater-treaters, separators, and dehydrator units, will be designed and constructed to prevent birds and bats from entering or nesting in or on such units and, to the extent practical, to discourage birds from perching on the stacks. Installing coneshaped mesh covers on all open vents is one suggested method. Flat mesh covers are not expected to discourage perching and will not be acceptable.

Invasive and Non-Native Species

Objective: To discourage the spread of invasive, non-native plants.

Use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas. If cogongrass is found on site, equipment will washed before exiting the site to prevent the spread of this highly invasive species to other locations. Post-construction monitoring for cogongrass and other invasive plant species should be conducted to ensure early detection control. In the case of split-estate lands, final seed mixtures will be formulated in consultation with the private landowner.

Pesticide Application

Objective: To protect the water quality of watersheds and natural stream substrate and morphology supporting special status species and their host species.

Any ground application of herbicides or other pesticides, sterilants, or adjuvants within 150 feet of listed species or habitat will require site-specific control measures developed in coordination or formal consultation with USFWS. No aerial application of herbicides or pesticides will be permitted

APPENDIX C

Correspondence



United States Department of the Interior

Bureau of Land Management

Eastern States
Jackson Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
http://www.es.blm.gov



IN REPLY REFER TO: 8160 (020) JMS EOI 817

July 08, 2010

Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523

Dear Mr. Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 817) to lease federal minerals under privately owned surface, i.e. split-estate minerals. Development locations have not been determined on a site-specific basis. Proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners, BLM's surface responsibilities rest only within the boundaries of any proposed development. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is 2 wells from 1 pad to be constructed with no more than 5.74 acres total, access road and pads, to be disturbed. The legal locations of the approximately 79.48 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Bossier Parish (Bossier Point Quadrangle)
T. 15 N., R. 11 W., Sec. 2, NW1/4NE1/4, Lots 6 & 8; (79.48 acres).

A review of the Louisiana Division of Archaeology site files shows three sites within one mile of the proposed lease sale. Based on information contained in the Louisiana SHPO site files their eligibility for listing on the National Register of Historic Places has not been determined, although these sites will not be affected by this proposed action.

The lease document will state that before the BLM approves any development proposal, a cultural resources survey that meets current professional standards and a report that meets





Louisiana Division of Archaeology requirements will be required on a site-specific basis. The report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

If you are aware of current or past use of this area for traditional religious activities, please let us know within 30 days. Any sensitive information that you provide will be held in strict confidence, as provided by law. If you have any questions, please call John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed Duane Winters

Duane Winters

Acting for Bruce Dawson Field Manager

Enclosure 1 - Map

cc via email: Mr. Earl Barbry, Jr.

Same letter sent to attached list. bc: JFO CF & RF ES RF DWinters AMcCartney

ES020:JMSullivan:04/15/10:601-977-5400:Bossier T15N.R11W.Sec.2.EOI 817.NA.Doc



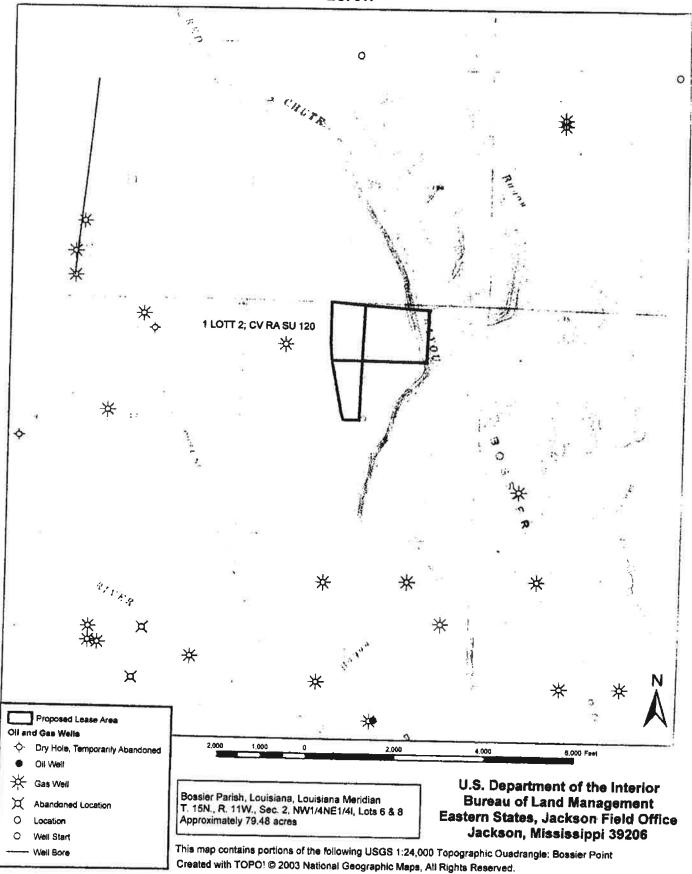
Original to:	cc: to these:
Mr. Earl Barbry, Sr., Chairman	Mr. Earl Barbry, Jr.
Tunica-Biloxi Tribe of Louisiana	Tribal Historic Preservation Officer
P.O. Box 331	Tunica - Biloxi Tribe
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	Marksville, LA 71351
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	Binger, OK 73009
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	mbotone@caddonation.org
Mr. Bill Anoatubby, Governor	Julie Ray, Historic Preservation Manager
Chickasaw Nation	Chickasaw Nation
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	gingy.nail@chickasaw.net
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Alabama-Coushatta Tribe of Texas	Alabama-Coushatta Tribe of Texas
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Livingston, TX 77351	Livingston, TX 77351
-	celestine.bryant@actribe.org
Kevin Sickey, Chairman	Linda Langley
Coushatta Indian Tribe	Cultural/Historic Preservation
P.O. Box 818	P.O. Box 818
Elton, LA 70532	
	Elton, LA 70532
John Paul Darden, Chairman	llangley@mcneese.edu
Chitimacha Tribe of Louisiana	Kimberly S. Walden, Cultural Director
P.O. Box 661	Chitimacha Tribe of Louisiana P.O. Box 661
Charenton, LA 70523	Charenton, LA 70523
•	kim@chitimacha.gov
Only send email to Preservation Officer	Augustine Asbury
	2nd Chief/ Cultural Preservation Officer
Tarpie Yargee, Chief	P.O. Box 187
Alabama-Quassarte Tribal Town	Wetumka, OK 74883
P.O. Box 187	aqttcultural@yahoo.com
Wetumka, OK 74883	
Vernon Yarholar, Town King	Charles Coleman





Original to:	cc: to these:
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Okemah, Oklahoma 74859	chascoleman@prodgy.net
A.D. Ellis, Principal Chief	Tim Thompson, Cultural Advisor
Muscogee (Creek) Nation of Oklahoma	Muscogee (Creek) Nation of Oklahoma
P.O. Box 580	P.O. Box 580
Okmulgee, Oklahoma 74447	Okmulgee, OK 74447
	johnniej@muscogeenation-NSN.Gov
Gregory Pyle, Chief	Mr. Terry Cole
Choctaw Nation of Oklahoma	Tribal Historic Preservation Officer
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	tcole@choctawnation.com
Beasley Denson, Chief	Mr. Ken Carleton
Mississippi Band of Choctaw Indians	Mississippi Band of Choctaw Indians
P.O. Box 6010	P.O. Box 6257
Philadelphia, MS 39350	Philadelphia, MS 39350
- Constitution of the Cons	kcarleton@choctaw.org
John Berrey, Chairman	Jean Ann Lambert, Cultural/Historic
Quapaw Tribe of Oklahoma	Preservation Office
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No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior

Bureau of Land Management

Eastern States
Jackson Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
http://www.es.blm.gov



IN REPLY REFER TO: 8100 (020) JMS EOI 817

July 08, 2010

Mr. Scott Hutcheson
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Mr. Hutcheson:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 817) to lease federal minerals under privately owned surface, i.e. split-estate minerals. Development locations have not been determined on a site-specific basis. Proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners, BLM's surface responsibilities rest only within the boundaries of any proposed development. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is 2 wells from 1 pad to be constructed with no more than 5.74 acres total, access road and pads, to be disturbed. The legal locations of the approximately 79.48 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Bossier Parish (Bossier Point Quadrangle)
T. 15 N., R. 11 W., Sec. 2, NW1/4NE1/4, Lots 6 & 8; (79.48 acres).

A review of the Louisiana Division of Archaeology site files shows three sites within one mile of the proposed lease sale. Based on information contained in the Louisiana SHPO site files their eligibility for listing on the National Register of Historic Places has not been determined, although these sites will not be affected by this proposed action.

The lease document will state that before the BLM approves any development proposal, a cultural resources survey that meets current professional standards and a report that meets





Louisiana Division of Archaeology requirements will be required on a site-specific basis. The report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed Duane Winters

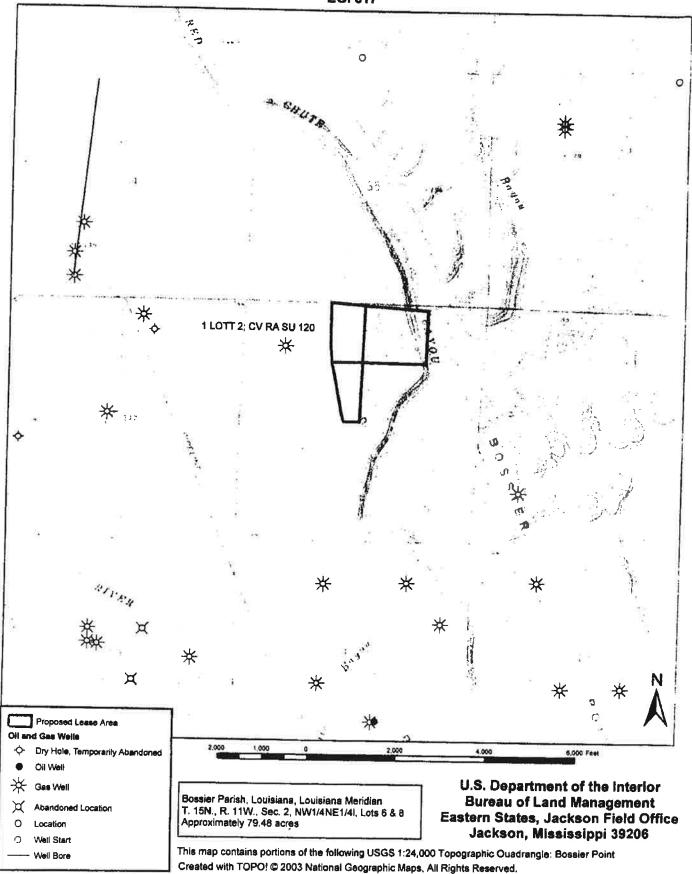
Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosure 1- Map

bc:
JFO CF & RF
ES RF
DWinters
AMcCartney

ES020: JMSullivan:07/08/10:601-977-5400:Bossier T15N.R11W.Sec.2.EOI 817.SHPO.Doc





No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior

Bureau of Land Management

Eastern States
Jackson Field Office
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Jackson, Mississippi 39206
http://www.es.blm.gov



IN REPLY REFER TO: 8160 (020) JMS EOI 841

July 23, 2010

Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 841) to lease federal minerals under privately owned surface, i.e. split-estate minerals. Development locations have not been determined on a site-specific basis. Proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners, BLM's surface responsibilities rest only within the boundaries of any proposed development. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is 2 wells from 1 pad to be constructed with no more than 5.91 acres total, access road and pads, to be disturbed. The legal locations of the approximately 80 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Bossier Parish (Koran and Bossier Point Quadrangles) T. 16 N., R. 10 W., Sec. 18, SW1/2SW1/4; (80 acres).

A review of the Louisiana Division of Archaeology site files shows two sites within one mile of the proposed lease sale. Based on information contained in the Louisiana SHPO site files their eligibility for listing on the National Register of Historic Places has not been determined, although these sites will not be affected by this proposed action.

The lease document will state that before the BLM approves any development proposal, a cultural resources survey that meets current professional standards and a report that meets



